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What You Need to Know About Climate Smart Agriculture and Why It Matters

Rob Bertram

Rob Bertram (far left) began his career as a plant scientist. Today, he help leads the Feed the Future initiative as the chief scientist in USAID's Bureau for Food Security.

*During President Obama's trip to Ethiopia this week, the White House **announced** that Feed the Future is investing in partnerships to scale climate-smart technologies in Africa. We sat down with USAID Bureau for Food Security Chief Scientist Rob Bertram to chat about climate smart agriculture and why it's such a hot topic lately.*

First things first: What is climate smart agriculture?

I like to say that climate smart agriculture is smart agriculture informed by climate science. It aims to meet the goals of increasing agricultural productivity and smallholder farmer incomes while enabling adaptation and resilience to climate change and reducing emissions along the way. For us, it's a way of doing agricultural development that uses resources efficiently and wisely, protects and conserves the environment, takes advantage of the best practices and technologies available, implements enlightened policies, increases market access, and reduces the high level of risk that smallholder farmers face. In a lot of ways, it's what is at the heart of Feed the Future's approach to sustainable development.

How did you end up working in this field?

I started my career in agriculture as a plant scientist when the Green Revolution was changing everything. It disrupted the trajectory we thought the world was on—toward starvation in countries like Bangladesh and India—and displayed how drastically agricultural science could change the course of history. My growing interest in applying agricultural science to international issues took me overseas to work in international crop research and eventually brought me to the U.S. Agency for International Development, which leads the U.S. Government's Feed the Future initiative.

After decades of working in this field, it's very exciting to see that agriculture and food security are at the forefront of the global development agenda. We're in the midst of a fantastic resurgence and renaissance in global strategic investment in

agriculture, with the United States leading this effort.

Why are we hearing so much more about climate smart agriculture in development these days?

Climate has always been important for agriculture – good agriculture has to be well suited to temperature, rainfall, soil fertility, and even more importantly, variations in these conditions.

But climate data today and modeling for the future emphasize that climate's impact on agriculture is more challenging, and more important, than ever.

Planning for significant future changes requires intentional efforts today. Recognizing this, the United States has taken a leading role recently in promoting climate smart agriculture, from helping launch the **Global Alliance for Climate Smart Agriculture** to implementing President Obama's **executive order** on climate-resilient international development.

Agriculture has always been a sector affected by climate change, but we understand far more now about how it is also a driver of climate change. Fortunately, Feed the Future gives us a lot of opportunities to be more efficient in using land, energy, and resources as we support smallholder farmers and work to reduce poverty and malnutrition.

Today, we're facing another trajectory that agricultural science can help change. Climate smart agriculture is at the forefront of the global policy agenda as a way to bend the curve on emissions in many areas where USAID works and reduce them outright in some situations.

What are some particularly interesting things Feed the Future is helping support via climate smart agriculture?

Rather than using climate smart agriculture in a few efforts, we are integrating the approach across the entire initiative. Much like Feed the Future's cross-cutting areas of gender and nutrition, we're making sure our food security efforts reflect a strategic understanding of the rural communities we're serving and, in this case, of the challenges climate variations pose to them.

For example, our **Feed the Future Innovation Labs** are helping develop climate resilient crops and livestock that tolerate hotter climates and more saline soils, can better withstand drought, and that resist pests and diseases that will likely spread these to new and larger areas in a changing climate. We're also interested in increasing nitrogen-use efficiency so we're working with crops such as legumes, which biologically enhance soil fertility and reduce the need for fertilizer and hence reduce emissions.

Through our efforts to scale proven technologies, we're taking the best and most relevant of climate smart solutions to the field and helping farmers successfully adopt them. Just this week, Feed the Future published its **annual progress report** and it includes a chart on the different types of technologies and practices we helped nearly seven million farmers use last year.

Is Feed the Future behind the curve or ahead of it in terms of incorporating climate smart agriculture?

Climate has always been a key, cross-cutting priority for Feed the Future, although the term "climate smart agriculture" may be a relatively new way of labeling it. In some ways, we are ahead of the curve because we've emphasized science and technology as a great tool to help us improve our agriculture work. We're collaborating with the international research community, universities, and the U.S. Department of Agriculture to get out ahead of the climate change issue and anticipate future trends. At the same time, there are also areas where we can do better, particularly around mitigation, reducing emissions, and helping farmers be as efficient as possible.

In fact, Feed the Future is in the process right now of enhancing this cross-cutting area and we'd like to hear from the public. We're **accepting comments** through August 14, 2015, on a draft paper on how we'll better incorporate climate smart agriculture throughout the initiative.

What excites you most about climate smart agriculture?

I'm very excited about the next stage of Feed the Future as we build on the impact of climate smart agricultural technologies, practices and policies. We're increasingly focused on getting the innovations we've helped develop out to the

field and scaling what works to more agricultural producers and other value chain actors.

Along those lines, we **announced** this week that we're investing $140 million in a series of public-private partnerships over the next three years. These partnerships will help deliver climate-resilient seeds and associated technologies to 11 million farming families across Africa who can benefit most from them, such as maize, rice, legume, and wheat farmers.

Climate smart agriculture ultimately helps us better meet our goals of sustainably reducing poverty, hunger and malnutrition. Global hunger in developing countries is intimately tied to climate change and we work with some of the most vulnerable communities to mitigate its impacts—prioritizing climate smart agriculture is a way for us to do our job better.

At the end of the day, climate smart agriculture is about investing in people. We're trying to change lives – and it is helping us to do that better and more sustainably, so that our whole enterprise targeting the poor and malnourished is even more powerful and effective.

*Visit our page on the **President's trip to Kenya and Ethiopia** this July to find more food security news from the trip.*